

FIG. 1

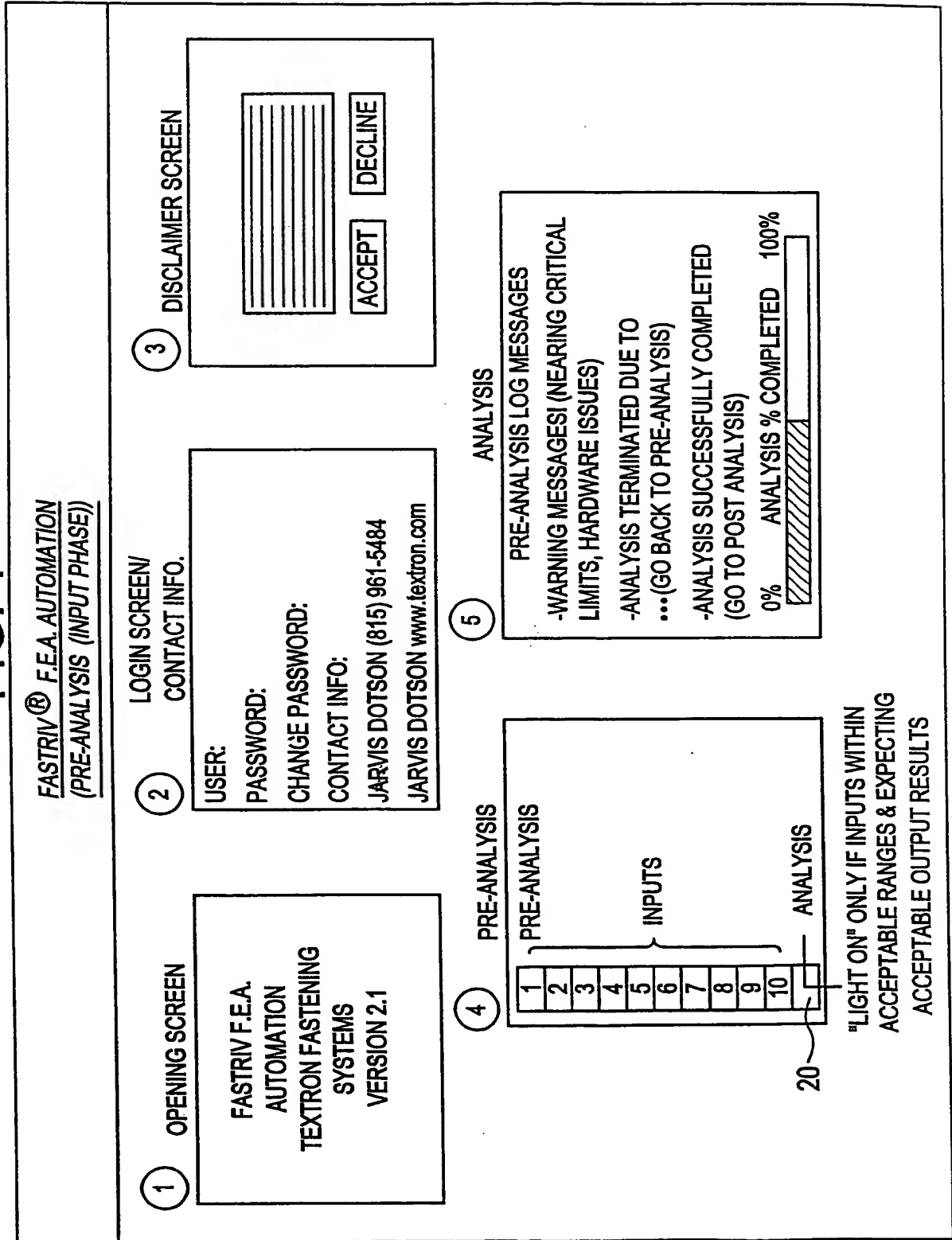


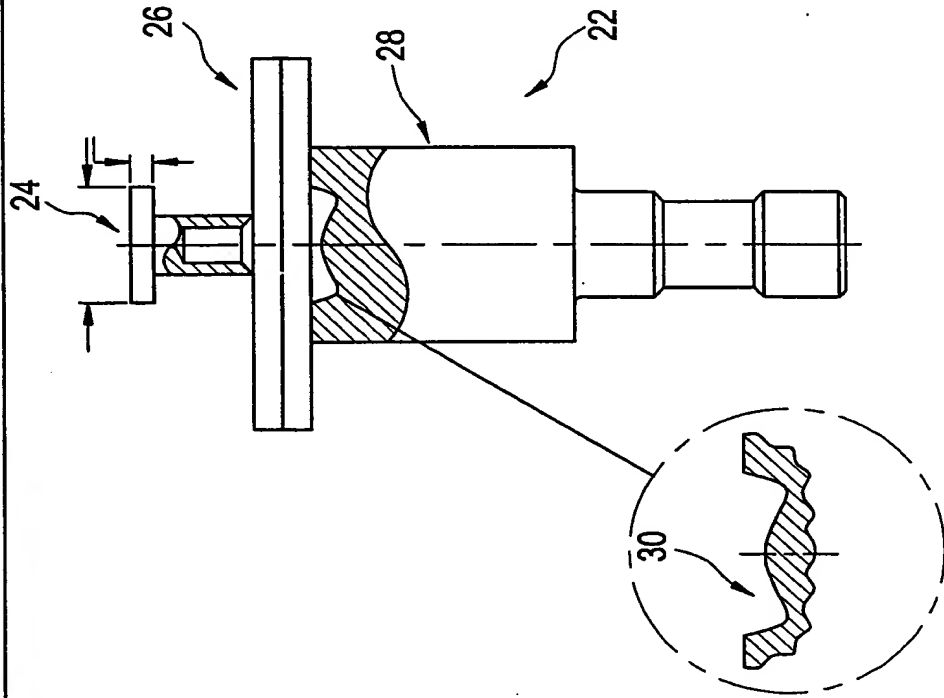
FIG. 2

FASTRIV® F.E.A. AUTOMATION  
(PRE-ANALYSIS (INPUT PHASE))

FILE EDIT PRINT

PROJECT DEFINITION
RIVET DEFINITION
JOINT DEFINITION
INSTALLATION EQUIPMENT DEFINITION
ANVIL DEFINITION
PLUNGER DEFINITION
DESIGN REQUIREMENTS
DATABASE SEARCH
F.E.A. PARAMETERS
POST PROCESSOR
ANALYSIS (LIGHT "ON" OR "OFF")

20





3/17

## FIG. 3

FILE	EDIT	PRINT
<div><div>FASTRIV® F.E.A. AUTOMATION (PRE-ANALYSIS / PROJECT DEFINITION)</div><div><div>CUSTOMER NAME: _____</div><div>DATE: _____</div><div>ANALYSIS: _____</div><div>APPLICATION DESCRIPTION: _____</div><div>INTRODUCTION: _____</div><div>BACKGROUND: _____</div><div>RESULTS: _____</div><div>CONCLUSION: _____</div><div>PROJECT NUMBER: _____</div></div></div>		
PROJECT DEFINITION		
RIVET DEFINITION		
JOINT DEFINITION		
INSTALLATION EQUIPMENT DEFINITION		
ANVIL DEFINITION		
PLUNGER DEFINITION		
DESIGN REQUIREMENTS		
DATABASE SEARCH		
F.E.A. PARAMETERS		
POST PROCESSOR		
ANALYSIS (LIGHT "ON" OR "OFF")		20

**FIG. 4**

**FASTRIV® F.E.A. AUTOMATION**  
**(PRE-ANALYSIS (RIVET DEFINITION))**

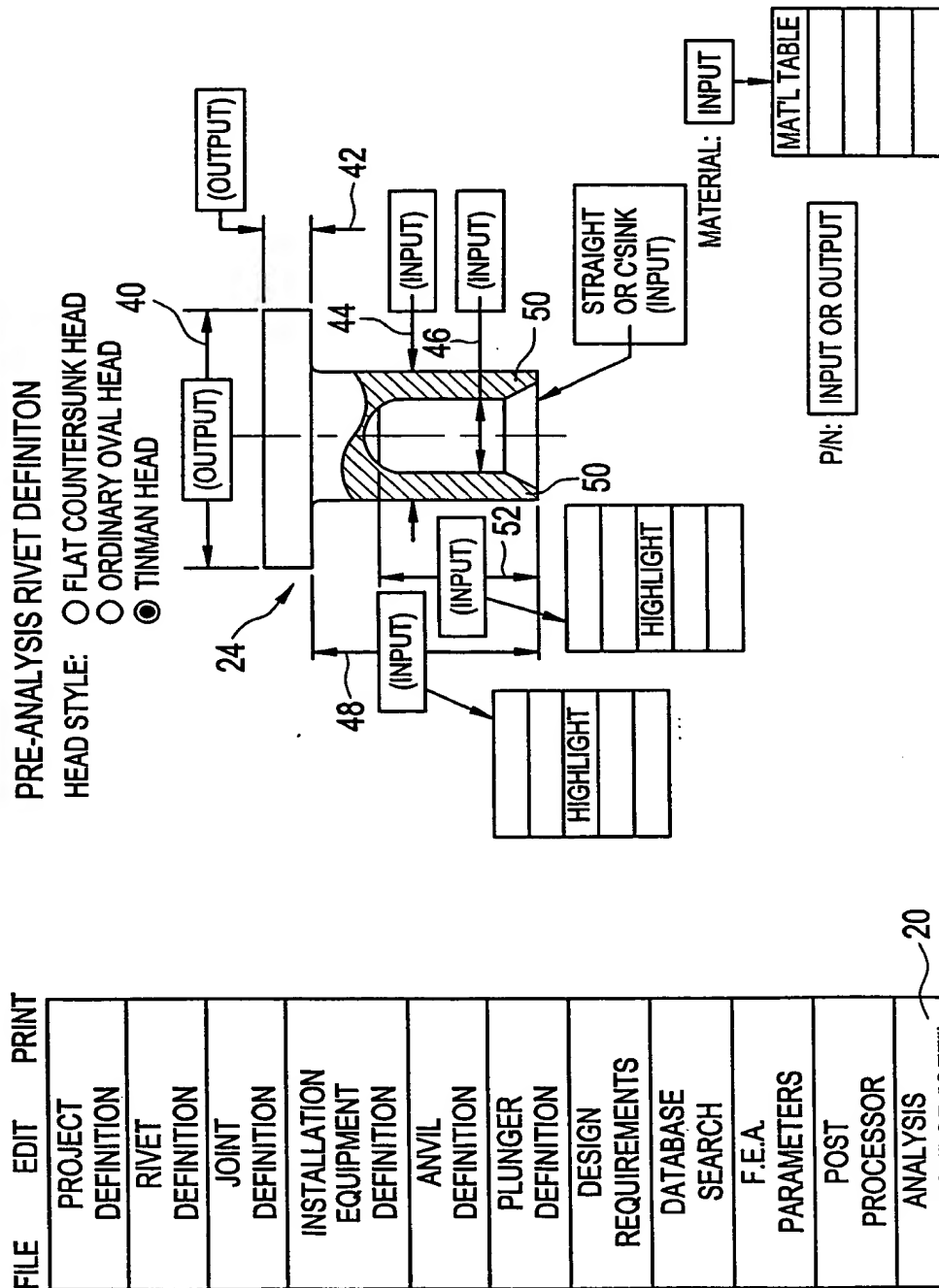


FIG. 5

FASTRIV® F.E.A. AUTOMATION  
 (PRE-ANALYSIS (JOINT DEFINITION))

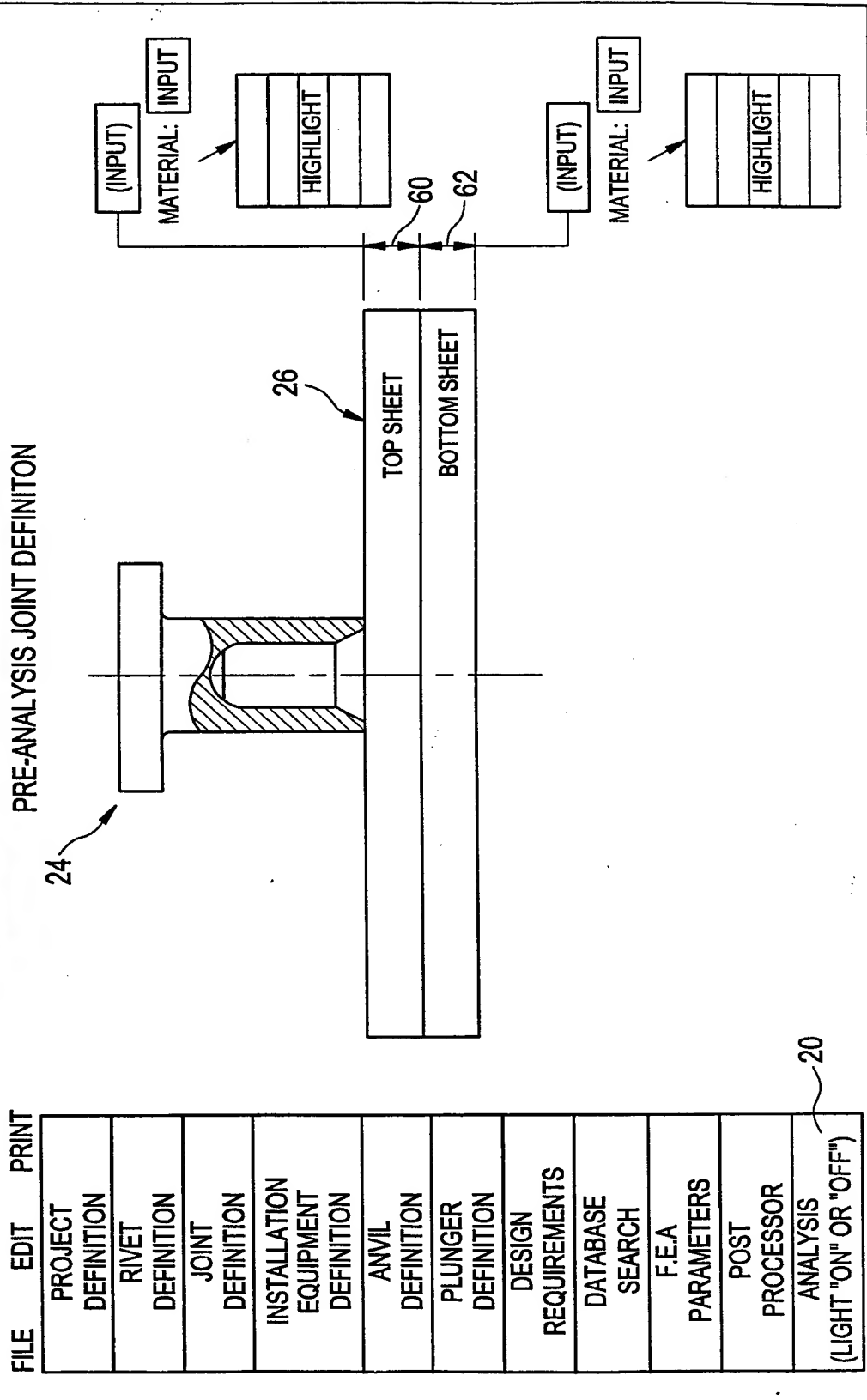


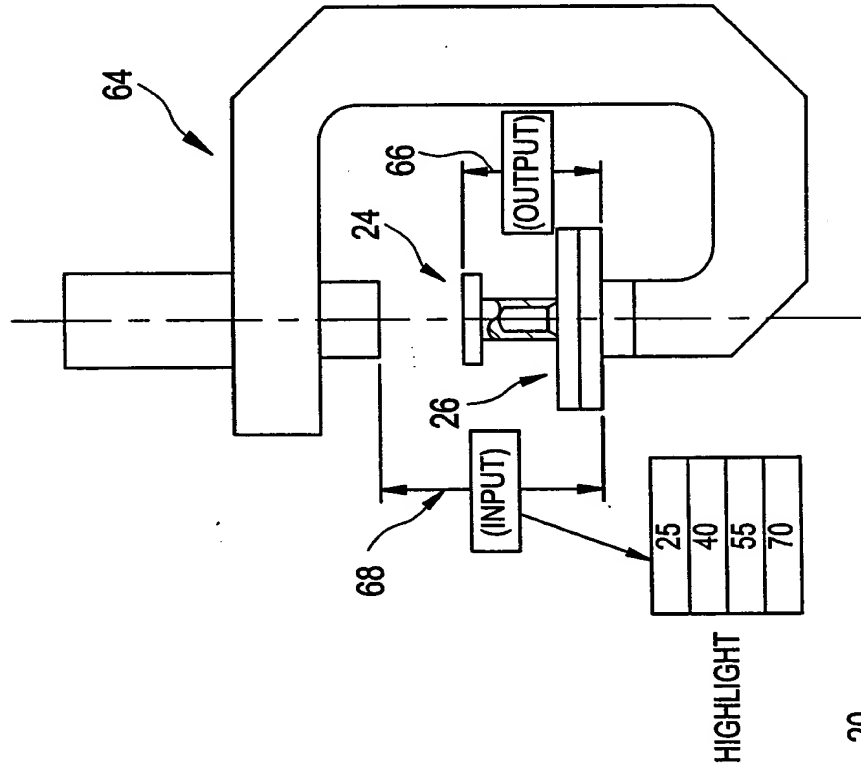
FIG. 6

FASTRIV® F.E.A. AUTOMATION  
(PRE-ANALYSIS (INSTALLATION EQUIPMENT DEFINITION))

PRE-ANALYSIS INSTALLATION EQUIPMENT DEFINITION

FILE EDIT PRINT

PROJECT DEFINITION
RIVET DEFINITION
JOINT DEFINITION
INSTALLATION EQUIPMENT DEFINITION
ANVIL DEFINITION
PLUNGER DEFINITION
DESIGN REQUIREMENTS
DATABASE SEARCH
F.E.A. PARAMETERS
POST PROCESSOR
ANALYSIS (LIGHT "ON" OR "OFF")



INSTALLATION  
SPEED:  
DEFAULT

MAX. CYLINDER  
PRESSURE:  
DEFAULT

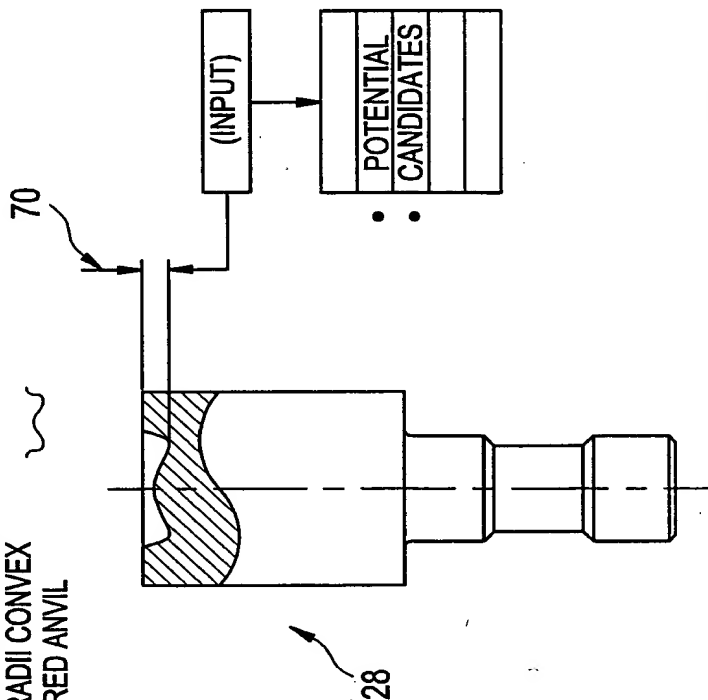
FIG. 7

FASTRIV® F.E.A. AUTOMATION  
 (PRE-ANALYSIS (ANVIL DEFINITION))

FILE	EDIT	PRINT
PROJECT DEFINITION		
RIVET DEFINITION		
JOINT DEFINITION		
INSTALLATION EQUIPMENT DEFINITION		
ANVIL DEFINITION		
PLUNGER DEFINITION		
DESIGN REQUIREMENTS		
DATABASE SEARCH		
F.E.A. PARAMETERS		
POST PROCESSOR		
ANALYSIS (LIGHT "ON" OR "OFF")		

PRE-ANALYSIS ANVIL DEFINITION

- ANVIL TYPE:
- ☒ PLAIN CONE ANVIL
  - ☐ DUAL RADIUS CONVEX ANVIL
  - ☐ SINGLE RADIUS CONVEX CHAMFERED ANVIL



MATERIAL:

PN:  • MODELED AS RIGID

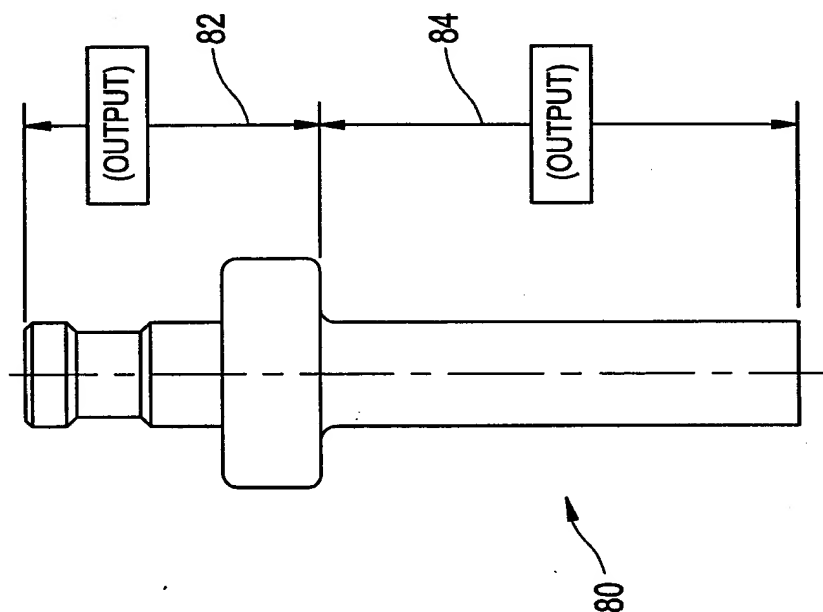
FIG. 8

FASTRIV® F.E.A. AUTOMATION  
 (PRE-ANALYSIS (PLUNGER DEFINITION))

PRE-ANALYSIS PLUNGER DEFINITION

FILE	EDIT	PRINT
PROJECT DEFINITION		
RIVET DEFINITION		
JOINT DEFINITION		
INSTALLATION EQUIPMENT DEFINITION		
ANVIL DEFINITION		
PLUNGER DEFINITION		
DESIGN REQUIREMENTS		
DATABASE SEARCH		
F.E.A. PARAMETERS		
POST PROCESSOR		
ANALYSIS (LIGHT "ON" OR "OFF")		

20

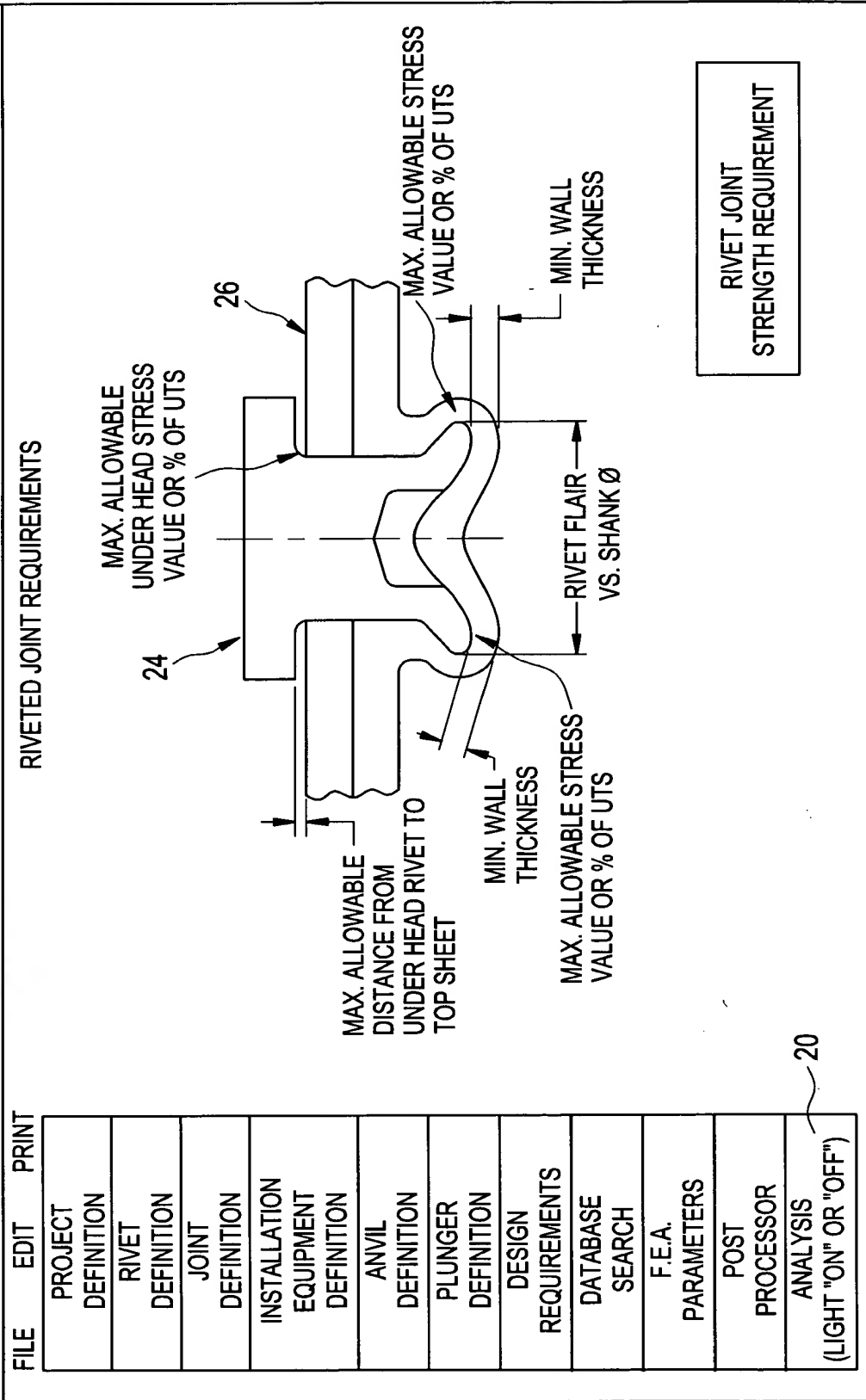


MATERIAL:   
 • MODELED AS RIGID



FIG. 9

FASTRIV<sup>®</sup> F.E.A. AUTOMATION  
 (PRE-ANALYSIS (DESIGN REQUIREMENTS))





10/17

## FIG. 10

### FASTRIV® F.E.A. AUTOMATION (PRE-ANALYSIS DATABASE SEARCH)

PRE-ANALYSIS DATABASE SEARCH

THE ABILITY TO SELECT  
ANY OF COMBINATION  
OF THE INPUTS AT THIS  
STAGE. THIS WILL TIE  
INTO A CENTRAL DATABASE

FILE EDIT PRINT

PROJECT DEFINITION
RIVET DEFINITION
JOINT DEFINITION
INSTALLATION EQUIPMENT DEFINITION
ANVIL DEFINITION
PLUNGER DEFINITION
DESIGN REQUIREMENTS
DATABASE SEARCH
F.E.A. PARAMETERS
POST PROCESSOR
ANALYSIS (LIGHT "ON" OR "OFF")

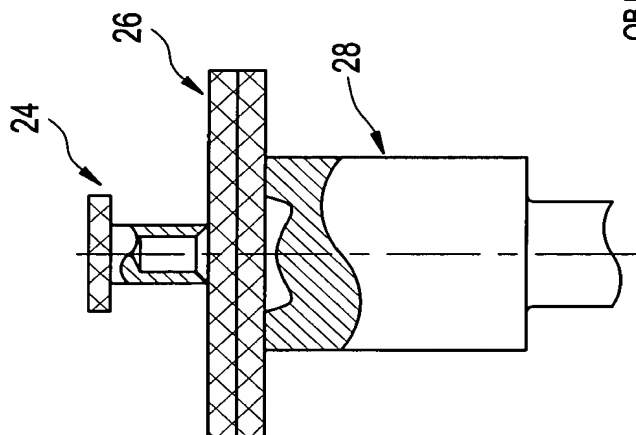
20

**FIG. 11**

**FASTRIV® F.E.A. AUTOMATION**  
**(PRE-ANALYSIS (F.E.A. PARAMETERS))**

## PRE-ANALYSIS F.E.A. PARAMETERS

FILE	EDIT	PRINT
PROJECT DEFINITION		
RIVET DEFINITION		
JOINT DEFINITION		
INSTALLATION EQUIPMENT DEFINITION		
ANVIL DEFINITION		
PLUNGER DEFINITION		
DESIGN REQUIREMENTS		
DATABASE SEARCH		
F.E.A. PARAMETERS		
POST PROCESSOR		
ANALYSIS (LIGHT "ON" OR "OFF")		



**OBJECT:**

- ☒ RIVET (MESH, BCC)
- ☐ TOP SHEET (MESH, BCC)
- ☐ BOTTOM SHEET (MESH, BCC)

## ADVANCED SETTINGS

INTEROBJECT BCC  
OK

ANALYSIS (LIGHT "ON" OR "OFF")	20
-----------------------------------	----



12/17

FIG. 12

FASTRIV® F.E.A. AUTOMATION

POST-ANALYSIS

POST-ANALYSIS

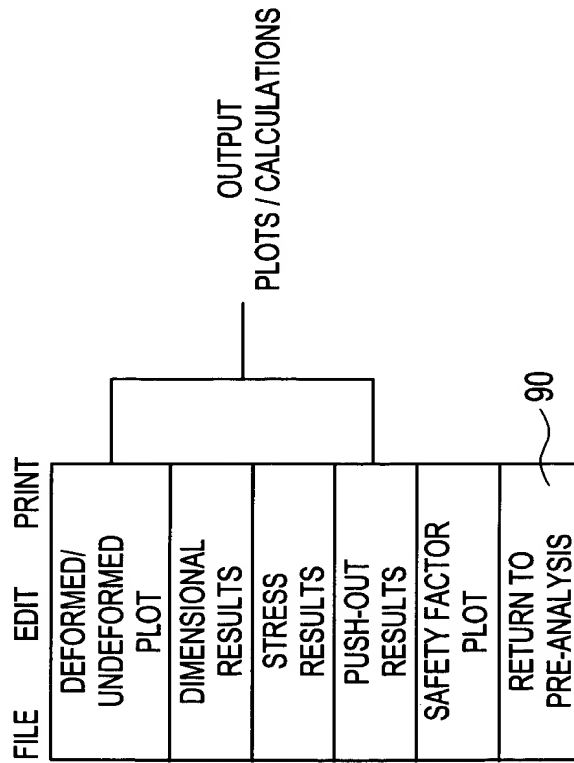


FIG. 13

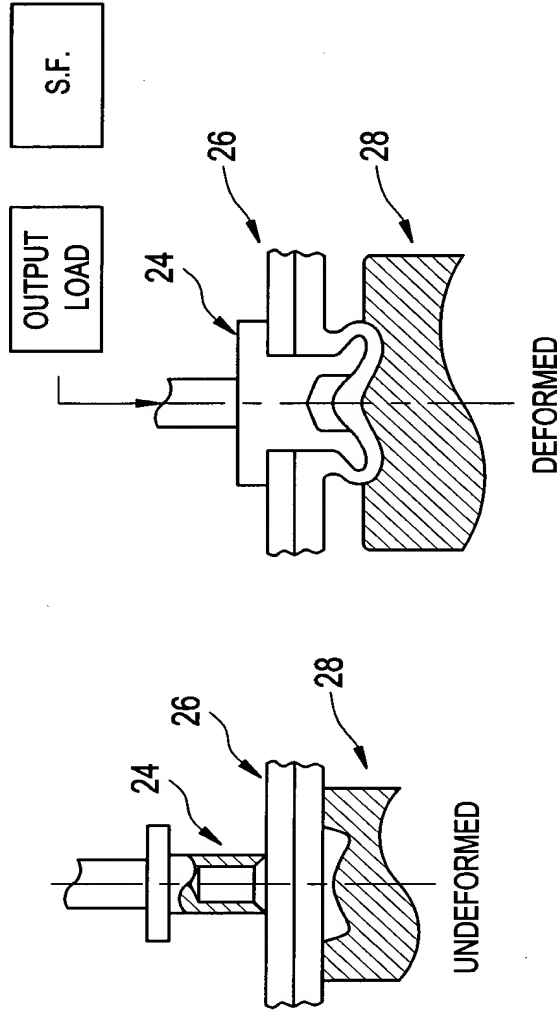
FASTRIV<sup>®</sup> F.E.A. AUTOMATION  
 POST-ANALYSIS

DEFORMED / UNDEFORMED PLOT

FILE EDIT PRINT

DEFORMED/ UNDEFORMED PLOT
DIMENSIONAL RESULTS
STRESS RESULTS
PUSH-OUT RESULTS
SAFETY FACTOR PLOT
RETURN TO PRE-ANALYSIS

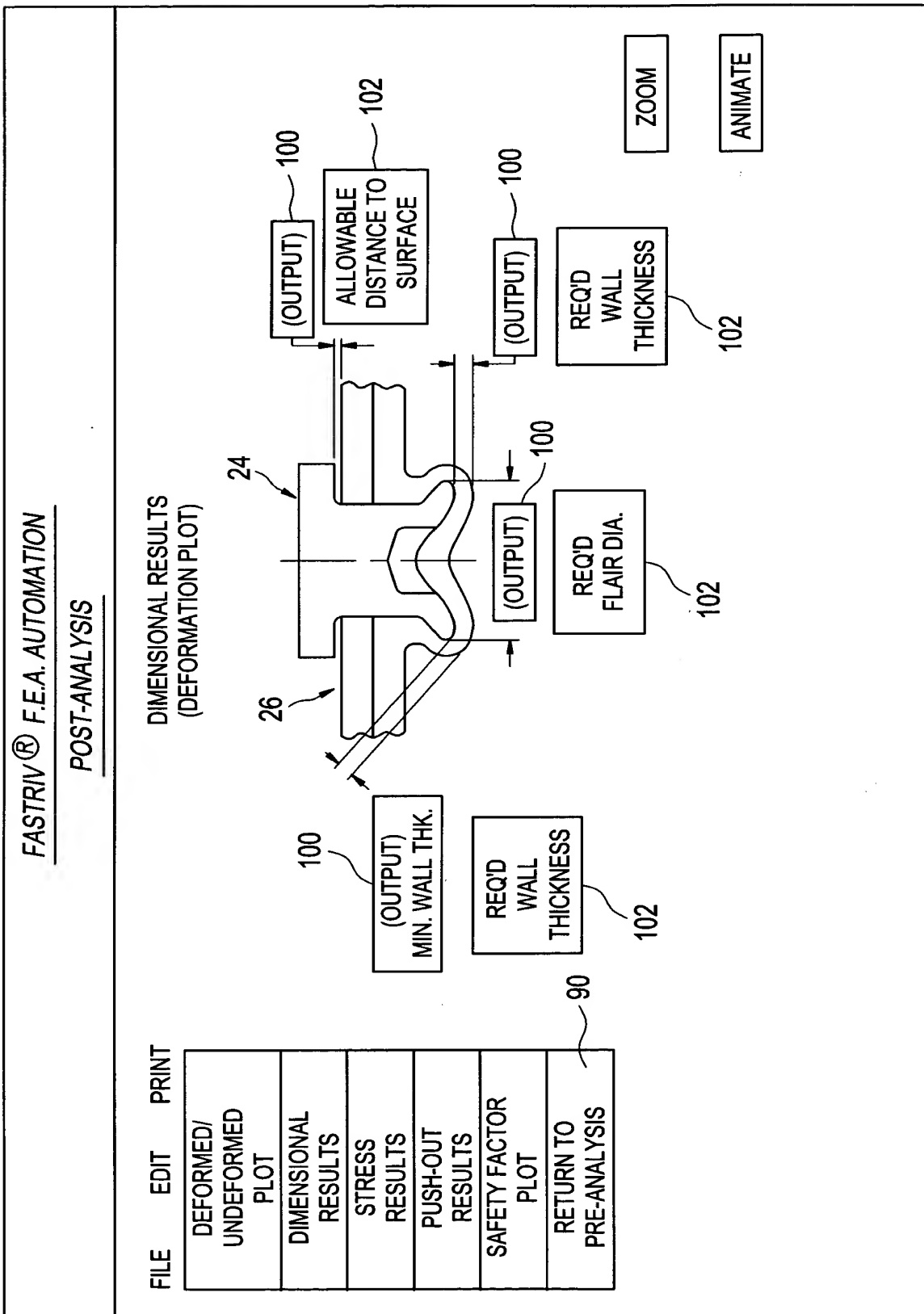
90



- ZOOM CAPABILITY
- ADD/ REMOVE ANY OBJECT(S)
- ANIMATION

L VS. Δ

FIG. 14



**FIG. 15**

**FASTRIV® F.E.A. AUTOMATION**

## POST-ANALYSIS

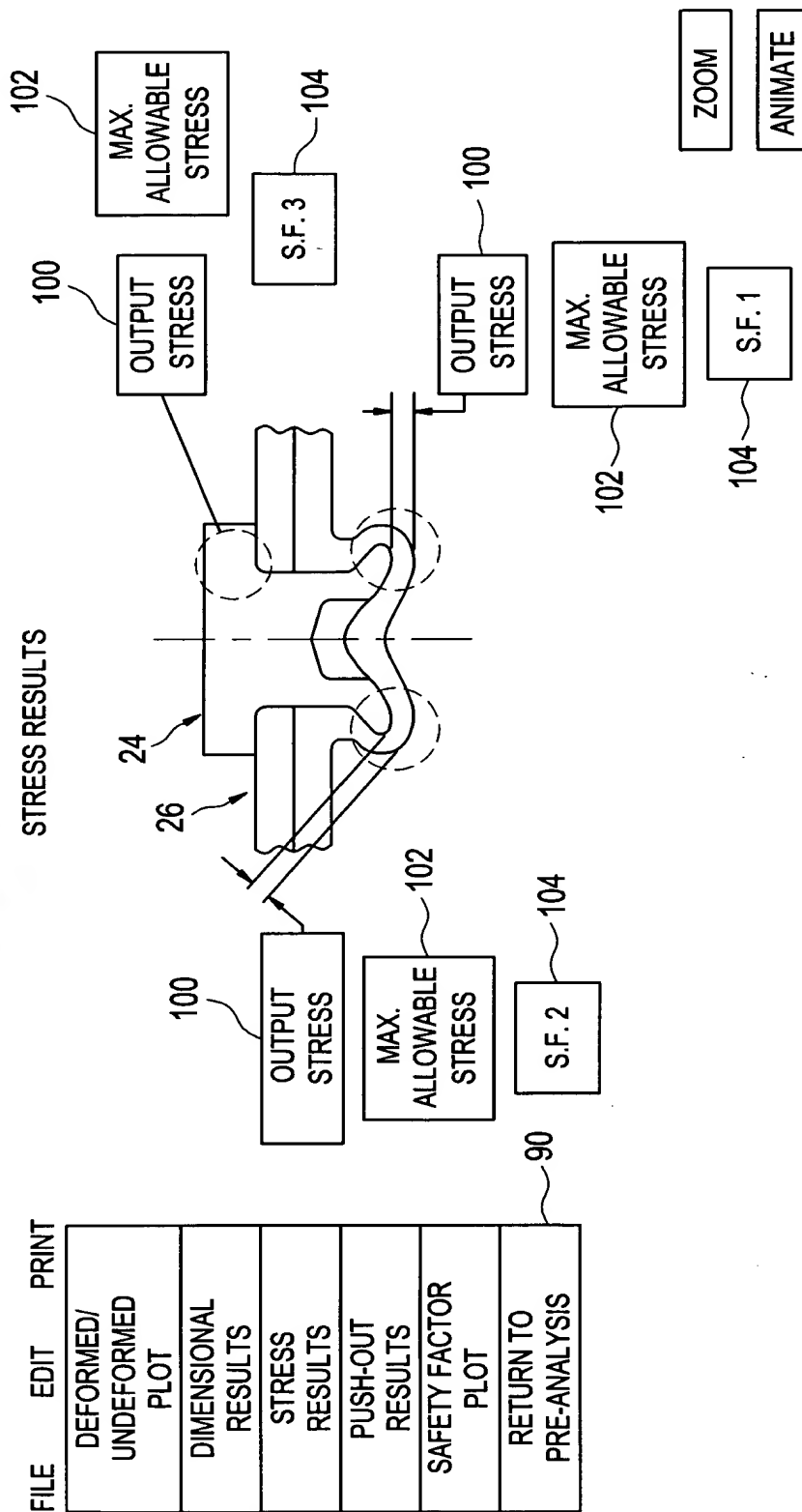


FIG. 16

FASTRIV® F.E.A. AUTOMATION  
 POST-ANALYSIS

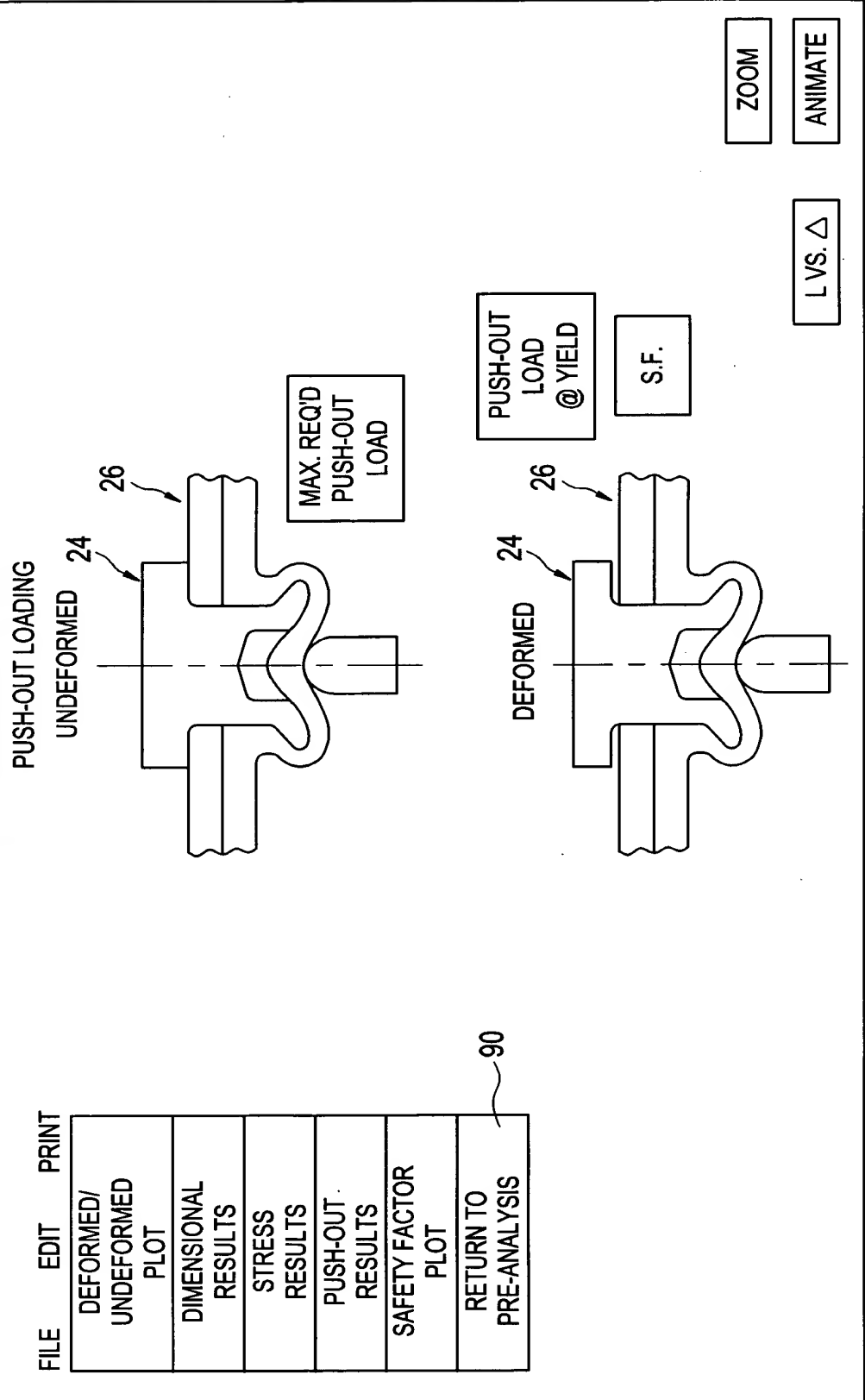






FIG. 17

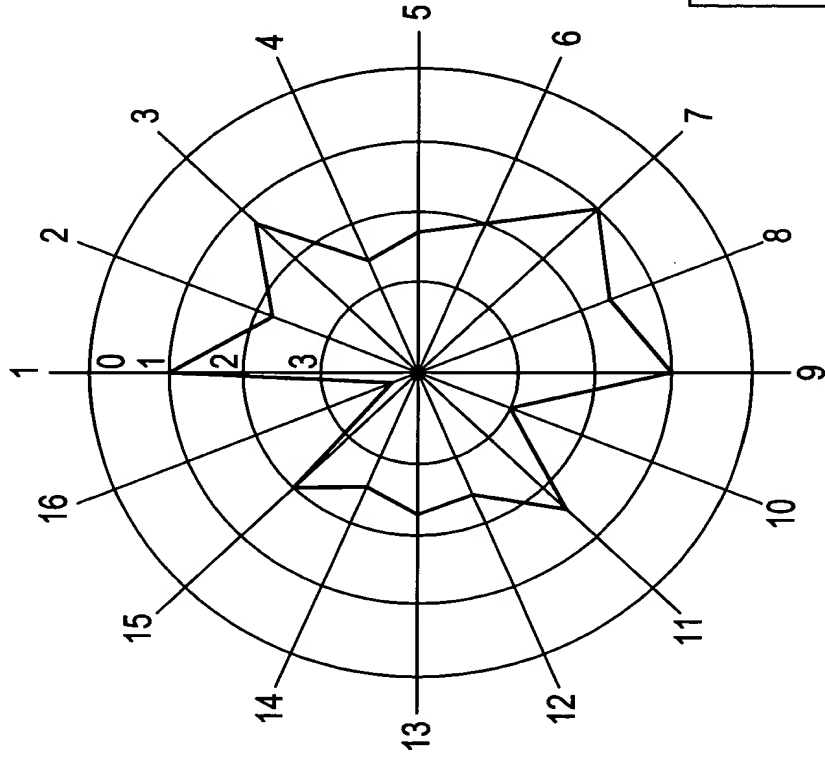
FASTRIV® F.E.A. AUTOMATION  
POST-ANALYSIS

SAFETY FACTOR PLOT

FILE EDIT PRINT

DEFORMED/ UNDEFORMED PLOT
DIMENSIONAL RESULTS
STRESS RESULTS
PUSH-OUT RESULTS
SAFETY FACTOR PLOT
RETURN TO PRE-ANALYSIS

90



LIST  
SAFETY  
FACTOR  
VALUES